Title (en)

WELLBORE TESTER VALVE

Publication

EP 0480584 A3 19930310 (EN)

Application

EP 91308314 A 19910911

Priority

US 58758290 A 19900911

Abstract (en)

[origin: EP0480584A2] An elongated valve means (10) is operable between a closed and opened position and is connected to a tubing string (14) for flowing fluid along an isolated flow path from a location downhole in a wellbore (11) to the surface. The valve means includes a main housing (41) within which a mandrel (38) is axially aligned. A packer (17) divides the borehole annulus into an upper and lower annular area. The valve device includes an annular power chamber (62) formed between the mandrel and the main body, and slidably receives a power piston (63) therewithin. The power piston is connected to a medial part of the mandrel. Metered flow from the upper borehole is indirectly effected on the piston face, thereby driving the piston uphole and carrying the mandrel therewith. The lower end of the mandrel has ports (75) formed through a sidewall thereof which are brought into registry with a complementary port (70) formed through the sidewall of the main housing. The housing port is in fluid communication with the lower borehole annulus. Detents (54) formed in the mandrel are engageable by a latch means (53) which positions the mandrel axially as the ports are brought into registry with one another. The latch means is retracted by a piston operated arm (51). Fluid pressure from the upper borehole annulus indirectly actuates the piston operated arm. The movement of the piston actuated arm and the power piston sequentially occur so that the latch means successively engages adjacent detents while successive ones of the mandrel ports are brought into registry with the port of the housing. Accordingly, the valve means is opened to admit fluid thereinto and up to the surface of the ground, whereupon the valve means is then moved to a first closed position, and thereafter again moved into the open position in response to hydrostatic pressure alternately being effected within the upper borehole annulus. <IMAGE>

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

E21B 34/108 (2013.01); E21B 2200/04 (2020.05)

Citation (search report)

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